Non-Narcotic Pain Management for People in Recovery Including OMM

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Disclosures

- I have no personal nor financial disclosures. Materials provided for educational purposes.

Objectives

- Review background and climate of current addiction/recovery care.
- Review multidisciplinary approaches in the biopsychosocial model.
- Review Non-narcotic medication, MAT, and interventional approaches.
- Review pragmatic OMT approaches for common disorders comorbid with addiction and recovery.

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Goals

- Help address the complexities of pain management and restorative challenges in patients in recovery and on MAT.
- Focus on improving clinical outcomes with effective communication strategies to improve patient quality of life and Activities of Daily Living.
- OMT office-based treatments will be reviewed for common pain-related complaints for patients in recovery.

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What is addiction?

- Addiction is a complex brain disease that is manifested by compulsive substance use despite harmful consequence.
- People with severe substance use disorder have an intense focus on using a certain substance(s) or reward seeking behaviors, such as alcohol or drugs, to the point that it takes over their life.
- Brain imaging studies show changes in the areas of the brain that relate to judgment, decision making, learning, memory and behavior control.

Sci Pract Perspect. 2007 Apr; 3(2): 4–16.
Imaging the Addicted Human Brain

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Markers of Substance Use Disorder

- **Impaired control**: a craving or strong urge to use the substance or behavior; desire or failed attempts to cut down or control substance use
- **Social problems**: substance use causing inability to complete major tasks at work, school or home; social, work or leisure activities are exacerbated because of substance use
- **Risky use**: substance is used in risky settings; continued use despite negative consequences
- **Drug effects**: tolerance (need for larger amounts to get the same effect); withdrawal symptoms (different for each substance)

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At Risk Addiction Considerations

- **Mental Health Issues** - The National Buerau of Economic Research (NBER) reports that there is a "definite connection between mental illness and the use of addiction substances"
- **Trauma –** based on how individual processes a traumatic event; history of childhood neglect or sexual, physical or emotion abuse commonly associated with substance abuse
- **Sexual and Gender Issues** – individuals who often are confused about the sexual identification, gender identification or have a history of sexual trauma often suffer from addiction
- **Fear, Self-Esteem, Doubt, Insecurity** – Underlying issues are common amongst most if not all of people that suffer from substance use disorders
- Addiction is a symptom of the underlying issues, and treatment should address underlying causes to help improve the success of sustainable recovery

Maryland Addiction Recovery Center. **Addiction: Underlying Causes and Conditions**
April 29, 2016

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Treatments

- 1) **Recognition** – addressing denial/misunderstandings, interventions
- 2) **Formal Assessment/Diagnosis** – health professional triage
- 3) **Stabilization** – medication, detoxification, individual and group therapies
- 4) **Individualized Care** – situation, comorbid medical, psychiatric and social problems

- **Medications**: control drug cravings and adress acute withdrawal
- **Therapy**: understand behaviors and motivations, improving self-esteem, physical fitness and resiliance, coping with stress and other mental health issues.

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Treatment Settings

- Hospital-based Care
- Tharapeutic communities or sobriety residences
- Outpatient Programs (IOPs and office-based MAT)
- Self-help groups (AA, NA), 12-step and family-based groups

Stages of Recovery

- 1) **Precontemplation** – negative impacts persist, no intention of behavioral change
- 2) **Contemplation** – problem recognition, feelings of guilt, hopelessness, desparation
- 3) **Preparation** – decision to change, making meaingful steps toward recovery
- 4) **Action** – Detox/sobriety and psychosocial support
- 5) **Maintenance** – Prolonged sobriety, healthy coping skills, avoiding triggers
- 6) **Termination?** – Abstinence and resolution of cravings, behavioral modification

National Institute on Drug Abuse. (2014, July). **Drugs, Brains, and Behavior: The Science of Addiction/Treatment and Recovery**.

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Pain Med Management in Recovery

- 1) Identify extent of *physical dependence*, *tolerance*, *substance abuse*, and *active versus recovering addiction* as well as **pain management needs**
- a) **Acute** – similar to non-addicted patients, limited dose and supply, followed by close follow-up to prevent relapse.
- b) **Chronic** – goals to maximize function and autonomy while providing reasonable analgesia
- c) **End of life** – receive aggressive management of pain regardless of addiction history
  - Generally, opioid doses to a minimum *effective* dose, noting tolerance potential and overall risk, weaning periodically to reassess pain control, and use nonpsychotropic/potentially pain medications first-line.
  - Therapeutic relationships with patients and their families so that pain medications can be used without abuse concerns

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Substance Abuse Terminology

Term	Definition
Physical dependence	Normal physiologic event (neuroadaptation): defined by development of withdrawal syndrome on abrupt dose reduction
Tolerance	Normal physiologic event (neuroadaptation): decreasing pharmacologic effect of drug's pain-relieving properties
Substance abuse	Use of any illicit drug. Unsanctioned use of licit drug or inappropriate use of alcohol
Active addiction	Presence of maladaptive behavior Loss of control Compulsive use Preoccupation Continued use despite harm

Savage S. Principles of pain treatment in the addicted patient. In: Graham AW, Schultz TK, eds. Principles of Addiction Medicine. 2nd ed. ASAM 1998 919–946.

Maladaptive Behaviors (ADRBs)

Selling drugs
Prescription forgery
Stealing or borrowing drugs from others
Requesting specific drugs
Drug hoarding during periods of reduced symptoms
Losing medication
Patient looking for pain medication at first visit to a new physician
Using multiple physicians to obtain medication
Obtaining prescription drugs from nonmedical sources
Using multiple pharmacies
Seeking medication for new sources of pain or unapproved use of the drug to treat other symptoms
Unsanctioned dose escalation
Continued dosing in spite of significant side effects or consequences that are due to the drug and not to the pain or the condition causing the pain (eg, alienation of friends and/or family, inability to work)
Injecting oral medications
Unapproved use of other psychotropic drugs during opioid therapy
Concurrent abuse of alcohol
Unwillingness to comply with full treatment plan (eg, utilization of nonopioid pain management techniques)
Evidence of use of illegal drugs (cocaine, marijuana, heroin)
Overwhelming concerns about the continued availability of the opioid being used
Risk-taking behaviors while using psychotropic medications
Frequent signs of intoxication: significant impairment of physical, mental, or social skills

[a]Adapted from Portenoy,[2] Sees and Clark,[13] and Passik et al.[14]

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Common Non-Opioid Pain Medications

- ***Non-opioid analgesics*:** acetaminophen, ibuprofen, naproxen, or NSAIDs. Be mindful of long term, liver, GI, cardiovascular risks, dose and duration related.
- ***Antidepressants*:** Some medical studies have shown that antidepressants can lessen chronic pain by increasing availability of the body's natural neurotransmitters. Tricyclic antidepressants appear to be better at aiding in pain relief than other types; these include amitriptyline, doxepin, and clomipramine.
- ***Anticonvulsants*:** Some chronic pain conditions can be aided by drugs normally prescribed to patients with epilepsy, such as phenytoin, gabapentin, or pregabalin. While it is not wholly clear why these drugs lessen chronic pain, nociceptive downregulatory modulation is the prevailing hypothesis.

A brief history of the development of antidepressant drugs: From monoamines to glutamate. Exp Clin Psychopharmacol. 2015 Feb; 23(1): 1–21.
Derry S, et al. **Pregabalin for neuropathic pain in adults.** Cochrane Database of Systematic Reviews. 2017; doi:10.1002/14651858.CD007076.pub3.

Interventional Considerations

- Acupuncture where needles are inserted in specific points throughout the body
- Electrical stimulation where the nervous system is stimulated to help correct imbalances
- Nerve blocks and RF ablations that interrupt pain signals that are sent to the brain
- Psychotherapy that involves a wide range of cognitive therapies, usually led by a therapist or counselor
- Relaxation therapies, such as massage, may help patients by distracting them and releasing muscle tension
- Biofeedback where electrodes are attached to the body to send information to a monitor that signals when it received the message
- Behavior modification allowing individuals to deal with pain without medication

Challenges with Substance Use Disorder

- When these individuals experience pain, they are **less likely to receive adequate pain management** than individuals in the general population.
- While relapse in a recovering individual may occur in spite of appropriate use of opioids and psychotropic medications required for effective pain management, **inadequate pain relief is also a significant risk factor for relapse**.
- Distinguishing between seeking pain relief and seeking drugs for the euphoric effects in the presence of tolerance and physiologic dependence can be misinterpreted as drug seeking or relapse behavior.
- Dual diagnosis or comorbid psychiatric and medical illnesses may complicate effective pain management
- Chronic anxiety/depression can reduce endogenous analgesics in the brain, like oxytocin, serotonin, and dopamine, which can increase the **number or severity of pain flare-ups**.

Management of chronic pain with chronic opioid therapy in patients with substance use disorders *Addiction Science & Clinical Practice* **volume 8**, Article number: 21 (2013)

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Pain Management Strategies Based on the WHO Stepladder Approach

Pain Level	Drug	Dose
1. Mild pain (nonnarcotic drugs)	Acetaminophen	
	Nonsteroidal anti-inflammatory drugs	
	COX-2 inhibitors	
2. Moderate pain (weak opioids used in addition to those in step 1)	Codeine	15–60 mg every 6 h
	Hydrocodone	5–7.5 mg every 4 h
3. Severe pain (strong opioids used in addition to those in step 1)	Morphine	10–20 mg every 4–6 h
	Oxycodone	5–30 mg every 4 h
	Hydromorphone	2–4 mg every 3–8 h
	Methadone	2.5–20 mg every 3–4 h
	Extended-release oxycodone	10 mg every 12 h[b]
	Extended-release morphine	15–30 mg every 8–12 h

[a]Adapted from World Health Organization.[9] Abbreviation: COX-2 = cyclooxygenase-2.
[b]In opiate-tolerant patients, 80–160 mg may be needed.

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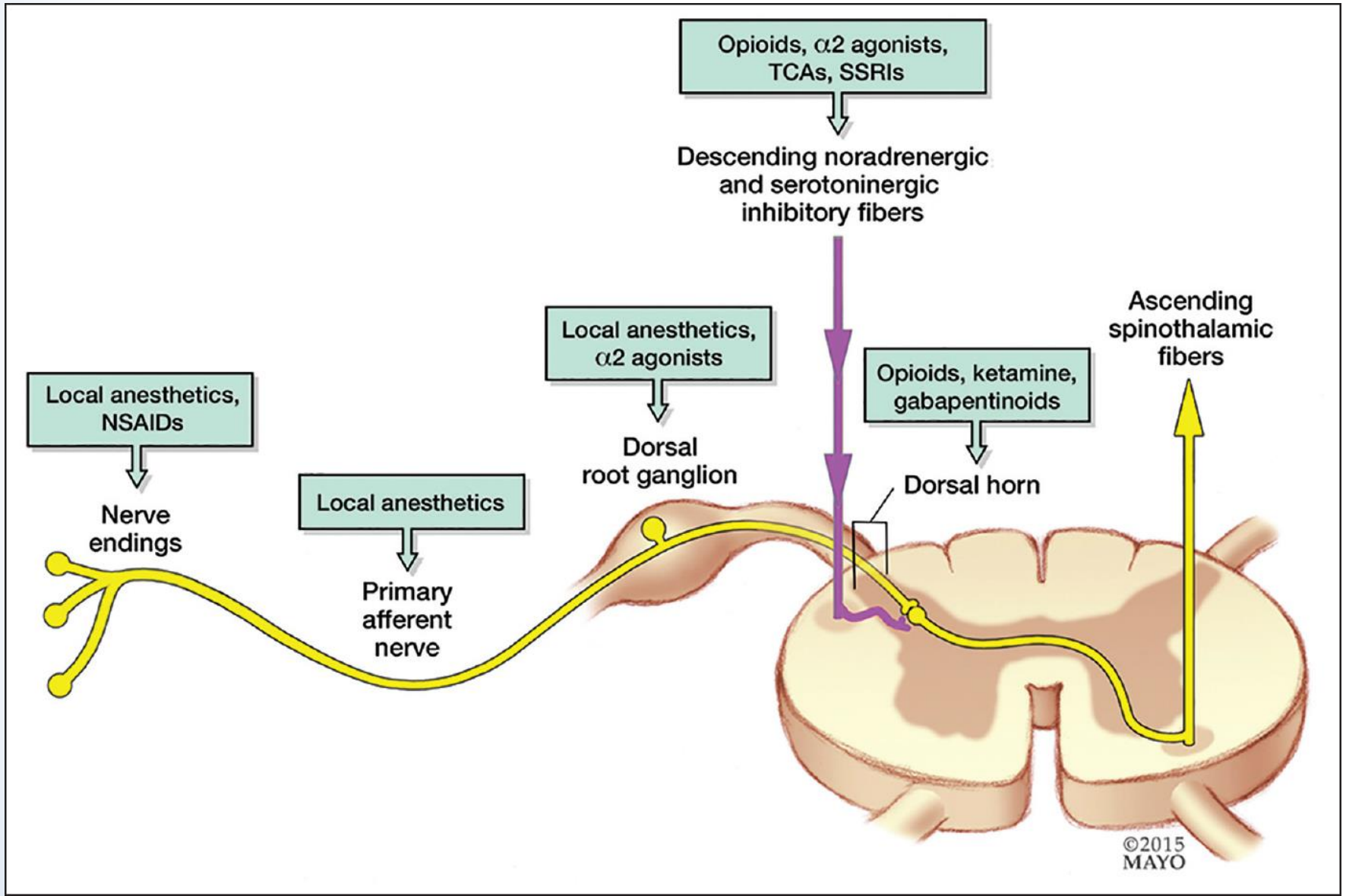
Nociceptive Pathway and Drugs



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Medication Selection

- Emphasis should be on using medications that **provide adequate pain relief.**
- Attempting to use “less addicting” narcotics or managing pain without appropriate analgesics may result in inadequate pain relief, which may actually precipitate relapse by leading recovering individuals towards **pseudoaddiction.**
- μ Agonist-antagonist drugs should be avoided in treating addicts who are actively abusing narcotics and those on opioid maintenance programs (i.e., methadone maintenance) because they can precipitate an acute withdrawal syndrome.
- Buprenorphine – Naloxone formulations for MAT may have an added benefit of pain control and may have some effect on reversal of OIH and opioid tolerance, however as opposed to Belbuca and Butrans, it is still not approved for chronic pain.
- Acute pain is a medical emergency and should be treated as such. If not treated aggressively, the pain resolution can become increasingly difficult to control.

Documentation Considerations

- Responsibility of individual practitioners to treat patients for legitimate medical purposes in accordance with generally accepted medical standards. (WHO, CDC, JCAHO)
- Clear documentation in the medical record of the need for narcotic analgesia, for both clinical and potential legal purposes.
- Indication for narcotic use, *response to non-opioids and adjuvant care*, medication provided with the dosage, dosing interval, and amount provided, as well as timing for the next medication refill that is agreed on by the patient and the physician.
- Routine PDMP and UDS monitoring, prior clinical trend review, and completed Pain Management agreements where appropriate.

Recovery Enhancement

- In addition to behavioral health care, risk of relapse is also related to the quality of a patient's substance abuse recovery and support program.
- Active involvement and participation in a recovery support program should be initiated or intensified during a period of pain management

Being active in recovery-related support systems (ie, aftercare, outpatient treatment programs, 12-step programs)
Having an active sponsor
Actively participating in a spiritual program
Maintaining stability in the workplace
Maintaining stability at home
Maintaining medical and psychiatric support
Avoiding sleep deprivation and hunger (chronic pain)
Maintaining an active exercise program (chronic pain)

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Behavioral Therapy Models

- **Cognitive Behavioral Therapy (CBT)** which uses a symptom reduction approach through thought reconstruction, with a focus on removing or reducing the disorder symptoms. The underlying concept behind CBT is that our thoughts and feelings play a fundamental role in our behavior and perception.

- **Acceptance and commitment therapy** (**ACT,** typically pronounced as the word "act") emphasises psychological flexibility through increasing acceptance, mindfulness, diffusion, values and commitment skills which helps to alter the clients' relation to her thoughts and experiences

Chronic Pain Management

- Goal to maximize level of physical, occupational and social functioning whilst minimizing iatrogenic cognitive consequences.
- Physical rehabilitation and osteopathic treatment can be appropriate to help address pain and restore function
- Stratify pain nociception into inflammatory, neurogenic, muscular, modulatory, etc.
- Address neuropsychiatric contributors to pain perception and behaviors
- Consider holistic therapy options and mindfulness to help overcome addictive behaviors.

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Common Chronic Pain Symptoms

- Sleeplessness and fatigue
- Greater need to rest after regular activities or an inability to perform ADLs
- Impaired vocational function
- Weakened immune system, resulting in more frequent illnesses and infections
- Depression, Anxiety, and Mood Swings
- Decreased appetite or nausea

Principles of Holistic Medicine

- Physical
- Nutritional
- Environmental
- Emotional
- Spiritual
- Lifestyle
- Social
- Intellectual

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Holistic Therapies

- Yoga
- Tai chi
- Guided meditation
- Acupuncture
- Massage therapy
- Spiritual therapy
- Routine exercise
- Proper nutrition
- Counseling
- Art therapy

Objectives of Holistic Therapy

- Identifying underlying causes of addiction
- Strengthening resistance to cravings
- Promoting physical fitness
- Increasing self-confidence
- Reducing the appeal of drug and alcohol use

Osteopathic Holistic Considerations

- Illness within context of whole person – mind, body, and spirit
- Health and wellness focus rather than absence of pain or disease
- Promoting the body's natural ability to recuperate and self-healing through diet, lifestyle and mental well-being.
- Optimizing mobility and function by treating flow of fluids, motion, tissue texture changes and structural make-up
- Osteopathic Manipulative Treatment addresses the musculoskeletal region and joints using techniques such as stretching, massage, gentle pressure, heat, and resistance.
- Physician treats the affected area in order to help regain normal tissue function, healthy movement of joints and bones, as well as circulation by addressing myofascial and mechanical barriers.
- OMT may be used alone or in combination with medication, physical therapy and exercise

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OMT in Addiction/Dependency

- Hands-on healing has long played a positive role in achieving relaxation and the release of tension and stress.
- Osteopathy specifically is able to target imbalances caused by drug or alcohol abuse in the body through the stimulation of neurotransmitters to bring about more effective function of both body and mind.
- OMT has demonstrated changes in baseline levels of βE, AEA, 5-HT and PEA immediately after treatment, as well as 24 hours after. Decrease in IL-6 and TNF-α serum levels has also been reported after repeated treatment.
- Osteopathy can play an important role in allowing people to get back in touch with themselves in a positive way, treating not just the physical pain but also anxiety and spiritual unrest.
- The use of osteopathic healing is able to provide viable, non-addictive and natural alternatives to pain management

Role of Osteopathic Manipulative Treatment in Altering Pain Biomarkers: A Pilot Study The Journal of the American Osteopathic Association, September 2007, Vol. 107, 387-400.

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Common Pain Complaints

~ 20 percent of adults suffer from chronic pain from some point in thei lives.

- Headaches
- Joint pain
- Backaches or neck pain
- Shoulder problems
- Sinus pain
- Pelvic pain
- Nerve or muscle pain
- Pain after injury

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Osteopathic Manipulative Treatment

- **Key Points:**
- **1)** Spine and peripheral structures behave as an interconnected unit, (ie – myofascial trigger points as a result of poor posture, somatovisceral or viscerosomatic reflexes)
- **2)** Diagnosis and assessment are based upon 10 distinct regional structures, palpatory TART findings, ROM testing, and segmental diagnoses.
- **3)** Correction of underlying somatic dysfunctions can optimize the self-healing mechanisms and relieve pain.
- **4)** OMTs are believed to modulate the neural/vascular, lymph, and chemotactic load of nociception via central and peripheral mechanisms.
- **5)** Technique tailored to patient's condition, safety, and physician discretion

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Neck, Headache, and Facial Pain

- Osteopathic modalities that can be used to address pain, including soft tissue kneading and stretching, myofascial release, muscle energy, strain-counterstrain, lymphatic pumps, and cranial osteopathy are common approaches
- Cervical segments may respond better to treatment after addressing thoracic spine and ribs first
- Soft Tissue Techniques can be a simple and effective initial approach

Occipital Decompression, Inhibition

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Myofascial Release

- puts a joint or tissue into a position of ease, to relax the fascia around that joint.
- After a successful treatment, tissue texture, alignment and mobility are improved.
- This can be used generally on soft tissue or entheses.
- This is an excellent technique to mobilize fluid in the lymphatic system.
- This technique can be used safely on most patients.

Scapulothoracic Myofascial Release

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Soft Tissue Techniques

- Includes stretching, kneading, and inhibition.
- These techniques use gentle guided pressure over the soft tissues to encourage relaxation.
- Excellent for minor spasms and fluid dysregulation.
- Generally, these techniques can be performed safely with most, including hospitalized and skilled patients.

Cervical Tissue Soft Tissue MFR

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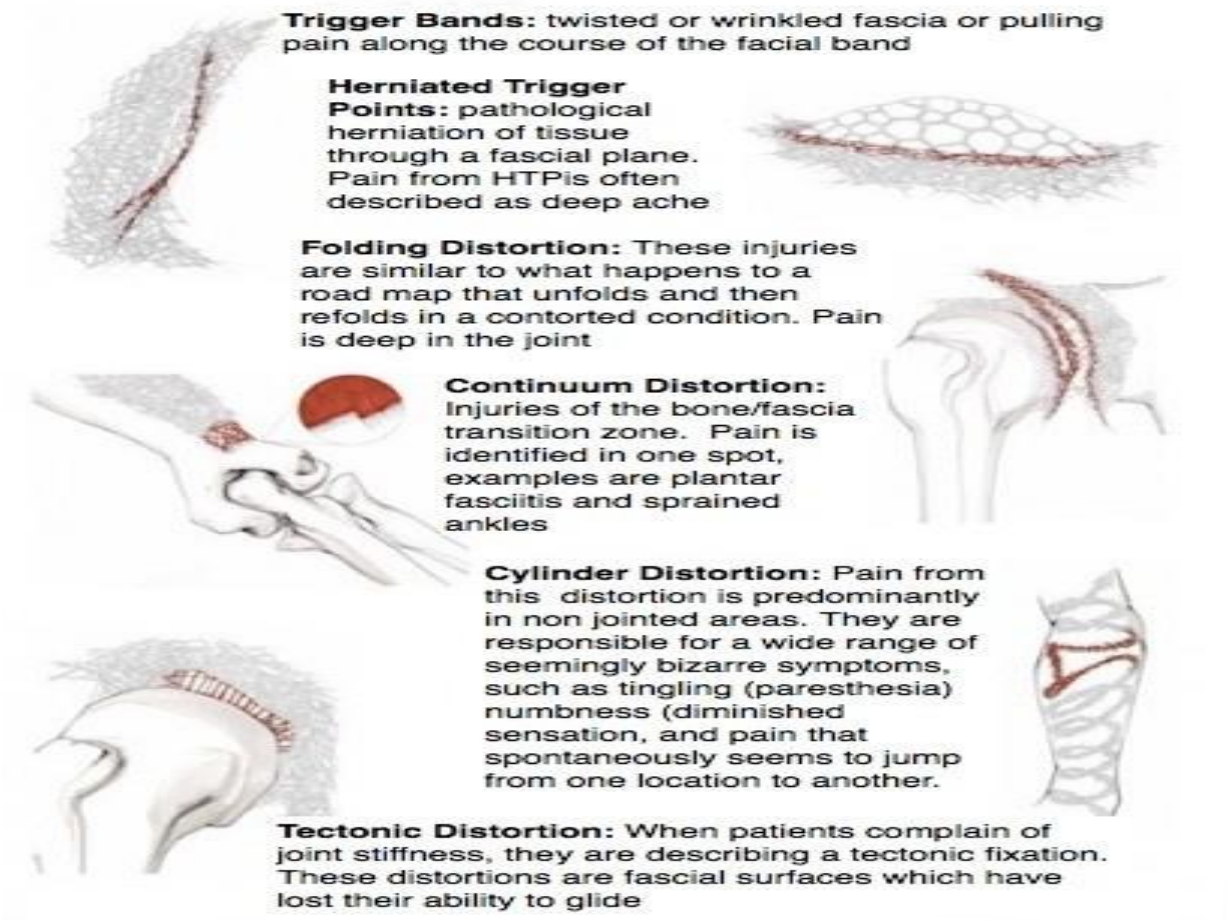
Fascial Distortion Model

- Treatments in the model focus on the fascia and restoring its function by focusing on correcting the distortions in the fascial system and thereby eliminating pain.
- Dysfunctions are interestingly diagnosed by patient gesturing to painful sites.
- Treatments utilize moderate-high force to affected area with appropriate vectors. There can be some temporary discomfort from techniques.
- ROM/Pain improvement can be fairly immediate.



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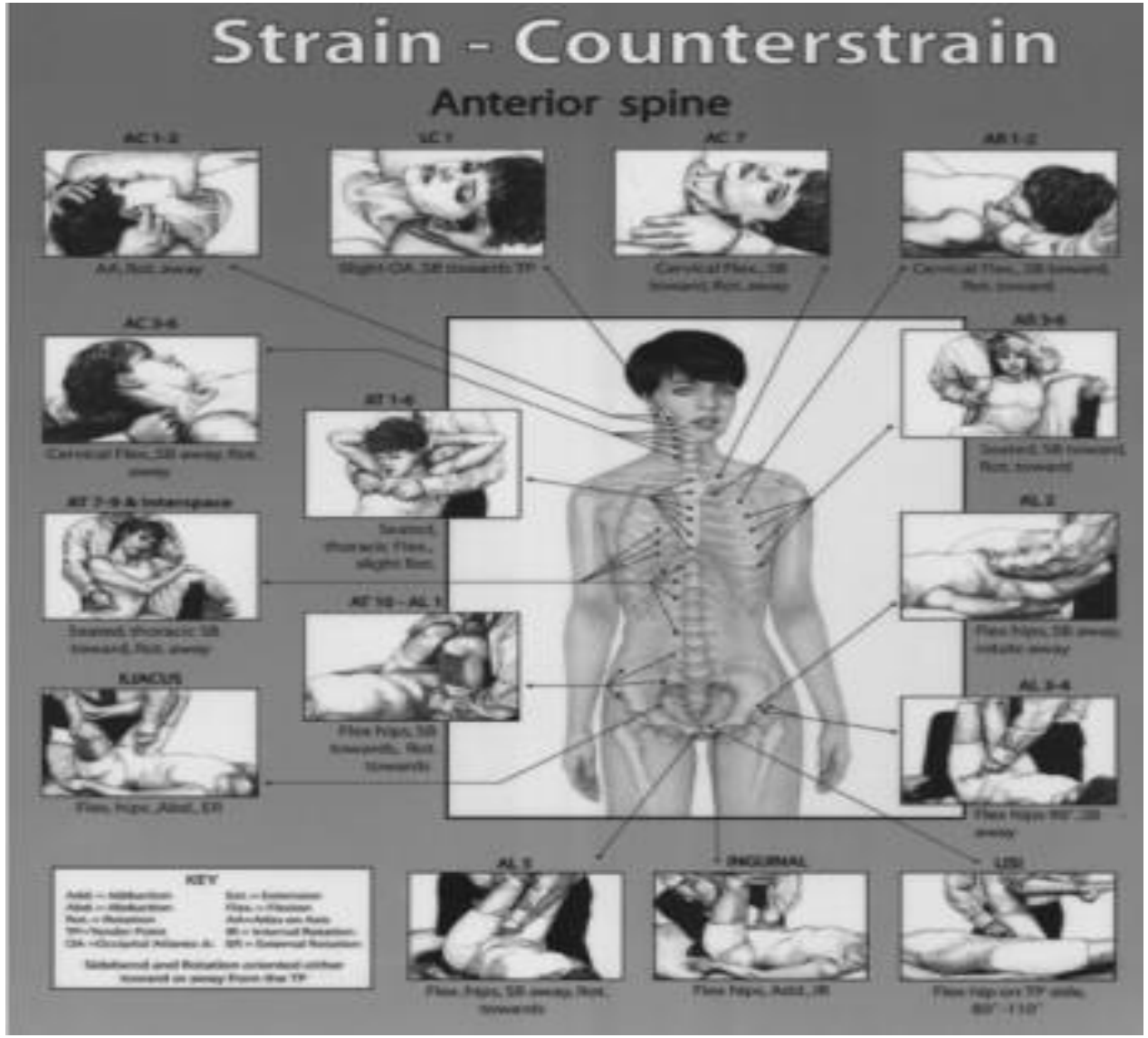
Jones Strain/Counterstrain

- Designated tender points are identified, and then they are passively placed to a position of ease (usually shortening of muscle) until at least 70% of the pain has decreased, and the patient is suspended in that position usually for at least 90 seconds.
- There are designated strain/counterstrain points and ideal treatment positions.
- Very convenient technique for complete relaxation of the patient with often significant resolution of somatic dysfunction.
- This technique can be performed with most, so long as the patient/physician can be positioned comfortably.

Anterior Counterstrain Points



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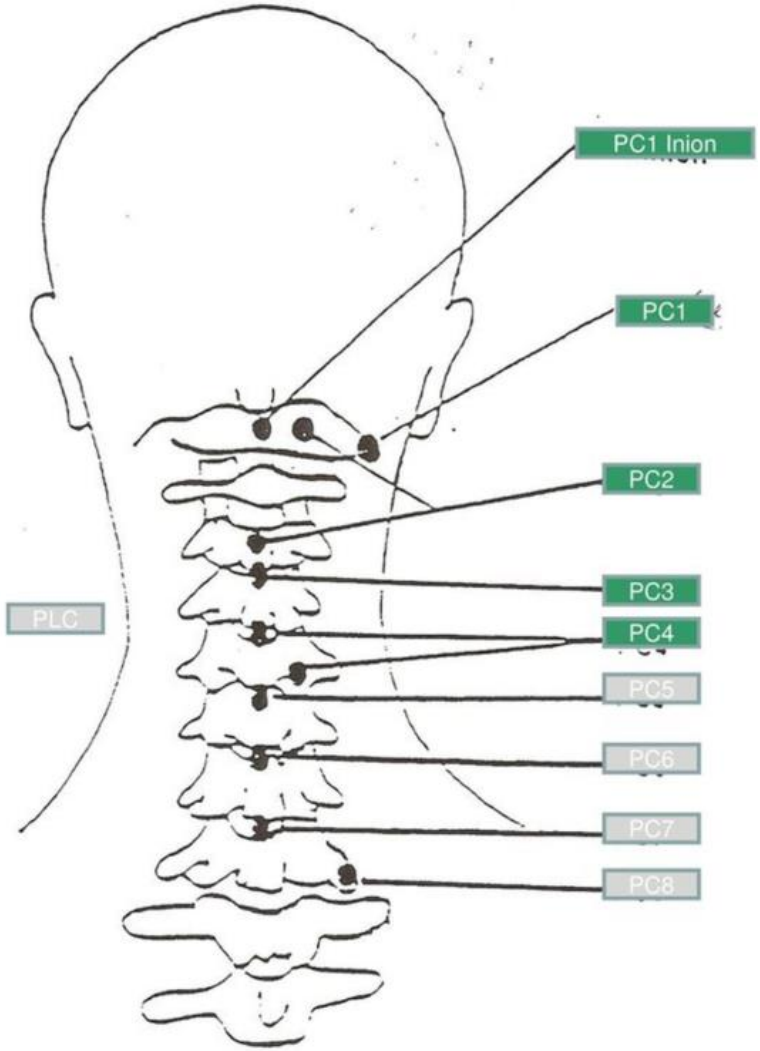
Cervical Posterior Counterstrain



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Balanced Ligamentous Tension

- A spasm or sore soft-tissue is held into a position of ease, followed by a balancing stage in which the practitioner slowly brings the joint to the physiologic position.
- Excellent gentle technique for fragile or hospitalized patients.

Balanced Ligamentous Tension

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Muscle Energy Technique

- Muscle energy is a **direct** and **active** technique.
- As the patient performs an isometric contract against the operator:
- Golgi tendon organ activation results in direct inhibition of agonist muscles
- A reflexive reciprocal inhibition occurs at the antagonist muscles.
- As the patient relaxes, agonist and antagonist muscles remain inhibited allowing the joint to be moved further into the restricted range of motion.
- These techniques should be used with discretion on acutely injured or fragile patients.

Muscle Energy Technique

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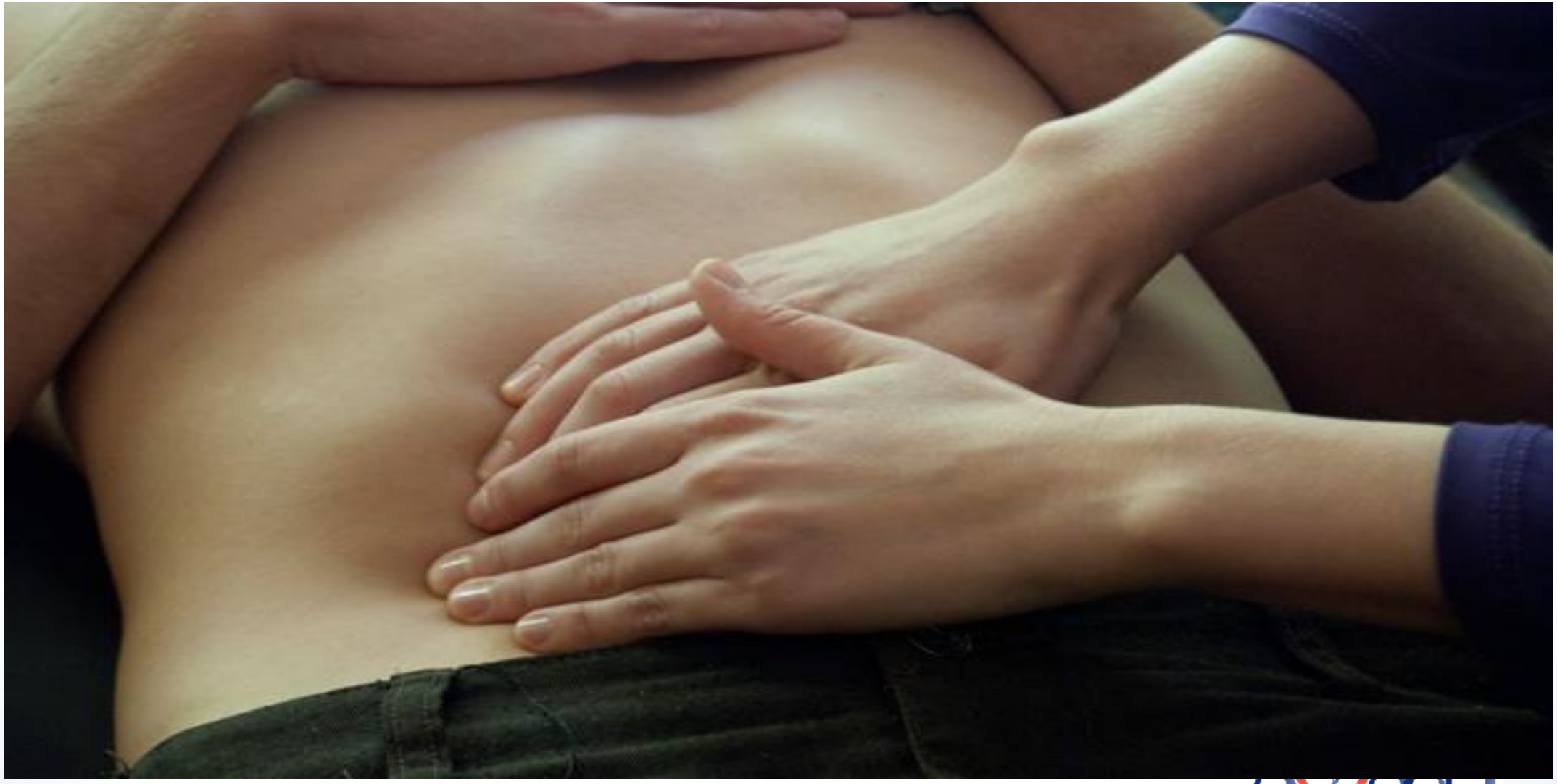
Visceral Techniques

- Allows the gentle release of fascia layers of the mesentery and abdominal-pelvic viscera, and also they can promote GI motility with manual fascia release of the bowels.
- Excellent for hospitalized patients and many common GI disorders.

Visceral Techniques



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High Velocity Low Amplitude

- HVLA is a type of manipulative treatment that involves a quick thrust over a short distance through a pathologic barrier.
- Key is proper positioning in all vectors and a gentle thrust. The positioning or treatment should NOT be painful.
- A detailed History and Physical is a must, as there are many contraindications for certain patients.

Cervical HVLA

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Contraindications

- Rheumatoid arthritic involvement or congenital deformity of the cervical spine (Trisomy 21, Achondroplasia)
- Carotid or vertebrobasilar vascular disease/anomalies
- Presence or possibility of bony metastasis or severe osteoporosis, or a history of pathological fractures.
- Post-laminectomy, unstable spine
- Inflammatory Spinal Disease

Articulatory Technique (LVHA)

- Low velocity and moderate to high amplitude forces utilized to carry a dysfunctional joint through its full range of motion, with the therapeutic goal of gently increasing range of motion against the pathological barrier.
- Usually this requires multiple repetitions of engaging the motion restriction, easing off slightly and re-engaging the motion restriction in an articulatory fashion.
- Can be used with a wider spectrum of patients, especially those in which HVLA inappropriate.

Articulatory Technique (LVHA)

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FPR and Still Techniques

- **Facilitated Positional Release**
- Positional technique, faciliated with compression or torque along dysfunction
- Quick, effective and efficient in seconds
- Indirect technique – similar to counterstrain, effective for subacute injuries

- **Still technique**
- Coupled compressive force and ROM of the tissue past its restriction, a release is palpated
- Compressive force released, then returned to starting position neutral or of ease
- Gentle indirect to direct technique, addressing all planes of motion to balance point.
- Compressive force should be utilized from a lever point

Cervical Facilitated Positional Release

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Cervical Still Technique

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Lymphatic Pump

- Techniques include **Miller Pump** (rhythmic, rapid, compression of the superior-anterior wall of the thorax), pedal pump, and diaphragmatic doming.
- **Thoracic Inlet (duct)** is always treated first to address the Lymphatic Toilet prior to treatment
- Caution with vigorous techniques along with bone mineral disease, suspected malignancy or injury.
- Cautious techniques preferred for immunocompromised or ill patients.

Thoracic Inlet Release

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Thoracic Pump

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Autonomic Regulation

- Sympathetic of Parasympathetic stimulation or inhibition can be demonstrated with temporally appropriate lifting or rocking of the corresponding areas/segments.
- Most commonly directed towards the Occipito-atlantal area (Vagus Nerve), rib angles (Parathoracic sympathetic Chain), and lumbosacral junction (Pelvic Parasympathetic fibers).
- Valuable for a number of conditions relating to autonomic dysregulation and generally very safe for most patients.
- Focus on a release of fascia near affected ganglia.

Rib Raising

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Cranial Osteopathy

- Involves light-touch manipulation, working to improve circulation and CNS fluid balance to and from the cranium, as well as balance tension in the membranous (dura) structures of the cranium down to the sacral attachment
- These techniques can also be beneficial to facial muscles, sinuses and neck.
- Higher learning curve and can be time consuming.

Cranial Vault Hold

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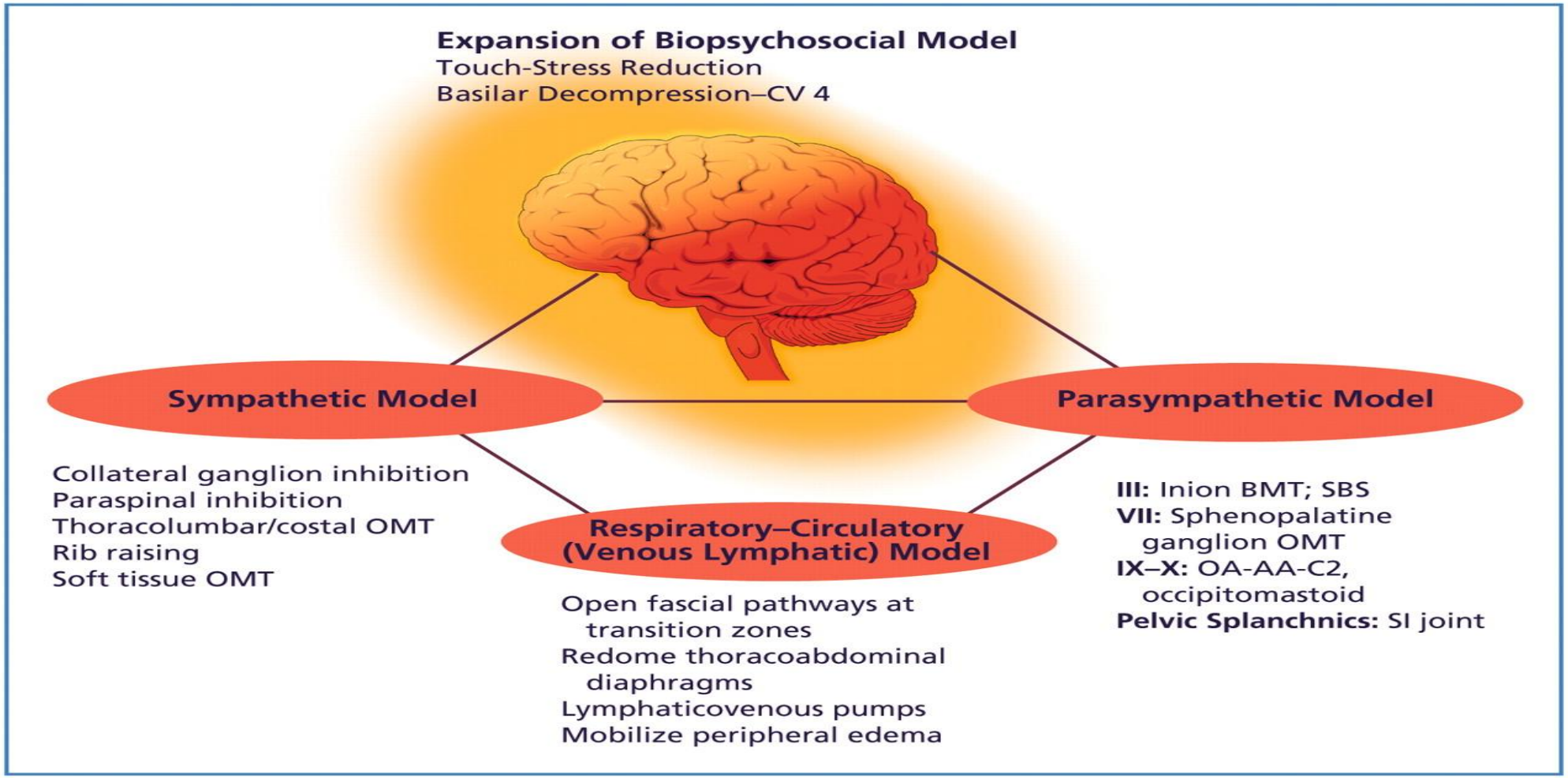
Autonomic/Cranial Treatments



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Conclusions:

- **1)** Chronic pain is highly prevelant in the general public and patients in recovery, and most providers must contribute to treatment.
- **2)** Few individual options are universally effective for pain-relief. Patients in recovery may require more frequent monitoring
- **3)** Document well and practice opiate prescribing with clear plan of care. Utilize non-opiate options first line. Underprescribing may lead to worse outcomes.
- **4)** Adopt CDC recommendations where possible.
- **5)** Share patient accountability and utilize multispecialty team when appropriate.
- **6)** Utilize modalities that are reasonable for the patient's needs.
- **7)** Health Maintenance, Wellness, and Preventive care remains a high-priority.

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Sources

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